



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,193	11/26/2003	Susumu Sakamoto	2003_1715A	6548

513 7590 06/01/2006

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

TRIEU, THERESA

ART UNIT PAPER NUMBER

3748

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,193

Applicant(s)

SAKAMOTO ET AL.

Examiner

Theresa Trieu

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9 is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on March 13, 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is responsive to the applicants' amendment filed on March 13, 2006.

Claims 6-9 have been added. Accordingly, claims 1-9 are pending in this application.

The arguments with respect to the references applied in the first Office Action were deemed persuasive; however, a new non-final rejection is set forth below.

Drawings

1. The drawings were received on March 13, 2006. These drawings are acceptable.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Shaffer et al. (Shaffer) (Patent Number 4,382,754).

Regarding claims 1 and 2, Shaffer discloses a scroll fluid machine comprising: a low-pressure stage compression part for compressing a fluid sucked in from an outside between mutually overlapping wrap portions of two scroll members (12, 20) performing a relative orbiting motion; and a high-pressure stage compression part (38', 36) for compressing the fluid sucked in from said low-pressure stage compression part between mutually overlapping wrap portions of two scroll members (12, 20) performing a relative orbiting motion; wherein the scroll members in said low-pressure stage compression part have a larger radial gap (B/A) between said wrap portions than that of the scroll members in said high-pressure stage compression part;

Art Unit: 3748

the scroll members in said high-pressure stage compression part providing a higher value of pressure rise than that provided by the scroll members in said low-pressure stage compression part.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer in view of Clarke.

Shaffer discloses the invention as recited above; however, Shaffer fails to disclose the scroll wraps of the high and low pressure stages have a different height.

As shown in Fig. 1, Clarke teaches that it is conventional in the scroll compressor art to utilize said wrap portions (31, 32) of the scroll members in said high-pressure stage compression part have a smaller-wrap height than that of said wrap portions (19, 20) of the scroll

members in said low-pressure stage compression part. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the scroll wraps of the high and low pressure stages have a different height, as taught by Clarke in Shaffer apparatus, since the use thereof would have achieved a desired pump of performance.

4. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer in view of Suefuji et al. (Suefuji) (Patent Number 6,267,572).

Shaffer discloses the invention as recited above; however, Shaffer fails to disclose the low-pressure stage scroll members and the high-pressure stage scroll members being spaced away from each other.

As shown in Fig. 7, Suefuji teaches that it is conventional in the scroll compressor art to utilize the low-pressure stage compression part comprising a low-pressure stage fixed scroll member (4A) and a low-pressure stage orbiting scroll member (22A), and the high-pressure stage compression part comprising a high-pressure stage fixed scroll member (4B) and a high-pressure stage orbiting scroll member (22B), wherein the low-pressure stage scroll members (4A, 22A) and the high-pressure stage scroll members (4B, 22B) being provided spaced away from each other; an electric motor (8) having a single output shaft (20); wherein the low-pressure stage orbiting scroll member (22A) and the high-pressure stage orbiting scroll member (22B) being provided respectively at both ends of the output shaft (20). It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the space between the low-pressure and high-pressure stages scroll members, as taught by Suefuji in Shaffer apparatus, since the use thereof would have eliminated the need providing a crankshaft

Art Unit: 3748

on the orbiting shaft to cause the orbiting scroll members to orbit and reduced in overall length in the axial direction and provided a compact scroll compressor device.

Allowable Subject Matter


5. Claims 6-9 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa Trieu whose telephone number is 571-272-4868. The examiner can normally be reached on Monday-Friday 8:30am- 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TT
May 25, 2006


Theresa Trieu
Primary Examiner
Art Unit 3748